Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 05-May-2026

Time: Three Hours **Max. Marks: 100 Marks**

BASIC ELECTROENCEPHALOGRAPHY (EEG) – (RS-3)

Q.P. CODE: 3307

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Define epilepsy and its classification in detail.
2. Essay on analogue to digital EEG
   OR
   International 10-20 system.

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Abnormal epileptic patterns.
4. Video EEG.
5. Normal EEG Rhythms
   OR
   Drugs affecting EEG.
6. Classical 3Hz/Sec spike and wave complexes.
7. Glasgow coma scale.
8. Neurotransmitters.
9. GTCS (Generalized tonic clonic seizures).
10. EEG in coma.
    OR
    Sleep transients in EEG
11. **Obstructive sleep apnea.**
    Or
    West syndrome
12. EEG filters.

SHORT ANSWER **10 x 3 = 30 Marks**

13. Paper speed.
14. Name any three invasive electrodes.
15. **BECTS (Benign Epilepsy with Centro Temporal Spikes).**
    Or
    Mention the factors affecting EEG
16. **Breach Rhythm.**
    Or
    Alpha Rhythm

17. **Narcolepsy.**
    Or
    Mention any three Non-Physiological artifacts
18. Gain.
19. OIRDA (Occipital Intermittent Rhythmic Delta Activity).
20. Treatment of Parkinson's Disease.
21. Potential difference.
22. Glassokinetic artefacts.

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II Year B.Sc. Neuro Sciences Technology Degree Examination – 07-May-2026

Time: Three Hours **Max. Marks: 100**

BASICS OF NERVE CONDUCTION STUDY (NCS) – (RS-3)

Q.P. CODE: 3308

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Compound Muscle Action Potential (CMAP). Description of recording and parameters with diagrams

2. Polyneuropathy- types, nerve conduction abnormalities and treatments

   Or

   Explain in detail on the Electrophysiological study of superficial peroneal nerve and its clinical co-relation

   OR

   Brachial plexus – diagrams, description, nerve conduction abnormalities, causes of brachial plexus injuries

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Saturday night palsy
4. Bell's palsy
5. Blink reflex

   OR

   Explain sciatic neuropathy

   Or

   Radial Neuropathy

6. Foot drop
7. F waves
8. Tarsal tunnel syndrome
9. Diabetic axonal peripheral neuropathy

   Or

   Axonal motor neuron disease

10. Distal ulnar neuropathy

    OR

    Recovery techniques of nerve conduction study and factors effects latency and velocity

11. Meralgia paraesthetica

    Or

    Wallerian degeneration

12. Sensory and motor comparison studies in carpal tunnel syndrome

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SHORT ANSWER **10 x 3 = 30 Marks**

13. Resting membrane potential
14. Axon wave / Axon response
15. Trigeminal neuralgia
16. H reflex
17. Axillary neuropathy
18. Claw hand
19. Neuro praxia
20. Motor conduction block
21. Miniature end plate potential
22. Musculocutaneous neuropathy

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II Year B.Sc. Neuro Sciences Technology Degree Examination – 12-May-2026

Time: Three Hours **Max. Marks: 100**

Applied Anatomy and Physiology related to Neuroscience Technology (RS-3)

Q.P. CODE: 3309

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Write in detail on the physiology of autonomic nervous system
2. Write in detail on resting membrane potential and development of action potential
   OR
   Write in detail about synaptic transmission

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Mechanism of muscle contraction
4. Visual pathway
5. Diencephalon
   OR
   Midbrain
6. Ventricular system of brain
7. Pyramidal tracts
8. Circle of Willis
9. Spinal segments
10. Write origin course termination and functions of any one sensory pathway
    OR
    Cerebral hemispheres
11. Medulla oblongata
12. Venous sinuses

SHORT ANSWER **10 x 3 = 30 Marks**

13. Structure of neuron
14. Lesions of parietal lobe
15. Auditory pathway
16. Structure of basal ganglia
17. Cranial vault
18. Regulation of autonomic nervous system
19. Myotomes
20. N-M junction
21. Name any five neurotransmitters
22. Difference between myotomes and dermatomes

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II Year B.Sc. Neuro Sciences Technology Degree Examination – 14-May-2026

Time: Three Hours **Max. Marks: 100**

PHARMACOLOGY (RS-3)

Q.P. CODE: 3310

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Classify antiepileptic drugs. Write the mechanism of action, uses and adverse effects of phenytoin

2. Define biotransformation. Write about phases of biotransformation with examples. Write briefly on enzyme induction and enzyme inhibition with one example for each

   OR

   Classify Antiplatelet agents and explain the mode of action and uses of Aspirin

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Morphine – Write its mechanism of action, four uses and two contraindications
4. Write briefly on preanesthetic medications with an example for each
5. Advantages and disadvantages of oral and sublingual routes with an example for each

   OR

   Ketoconazole
6. Succinylcholine – Write its mechanism of action, two uses and two adverse effects
7. Frusemide (furosemide)- Write its mechanism of action, four uses and two adverse effects
8. Compare and contrast low and high molecular weight heparin
9. Discuss therapeutic uses of adrenaline
10. Write the management of paracetamol poisoning

    OR

    Treatment of organophosphate poisoning
11. Write briefly on pharmacology of semisynthetic penicillin's
12. Write briefly on any four techniques of local anesthesia with an example

SHORT ANSWER **10 x 3 = 30 Marks**

13. Write antagonist for warfarin, morphine and benzodiazepine toxicity
14. Mention any three uses of propranolol
15. Mention any three contraindications of sodium valproate
16. Mention any three oral hypoglycaemic drug class with an example for each
17. Mention any three antiviral drugs
18. Mention any three advantages of antimicrobial combination with one example
19. Write any three differences between d-Tubocurarine (d-TC) and succinylcholine
20. Name any three styptics
21. Name any three drugs that affects pupillary size and light reflex with an example
22. Define plasma half – life and therapeutic index with an example

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